Media Converter

User Manual

Version: V5.1.8

Distance: MM: Multimode SM: Single-mode

☐ 0~2km MM ☐ 0~5km MM

☐ 0~20km SM ☐ 0~25km SM

☐ 0~40km SM ☐ 0~60km SM

☐ 0~80km SM ☐ 0~120km SM

Optical Port:

☐ SC ☐ FC ☐ ST

Fiber:

☐ Dual Fiber ☐ Single Fiber

Converter type:

☐InsidePower ☐OutsidePower ☐Module

Wavelength:

☐ 850nm ☐ 1300nm

☐ 1310nm ☐ 1550nm

Management:

☐Yes ☐ No

Contents

Chapter 1 Introduction 4

1.1 Descriptions 4

1.2 Characteristics.....5

1.3 Technical Parameters.....5

Chapter 2 Operation 7

2.1 Front Panel 7

2.1.1 LED indicator lamp.....7
2.1.2 Optical Port 7
2.1.3 Ethernet port (NODE / HUB)....7

2.2 SW1 7

Chapter 3 Installation 7

3.1 Installation.....7

Chapter 1 Introduction

1.1 Descriptions

Media converter transmits IP over fiber, applied in many places where need long distance transmission. Enlarge the TP network range by MM or SM fiber. Low consumption and high resistance to electromagnetic interference of the optical fiber make the transmitting distance spread from 100m to several decades KM or hundred KM, improve the communication quality as well. And make the server, repeaters, switch, terminal PC connect easily. The user manual introduces Media Converter characteristic, function, use and maintenance. Please read the user manual carefully before installation.

1.2 Characteristics

- Supports SNMP management (only for management device)
- Selectable optical link-loss alarm
- Selectable four transmitting modes
- Comply with IEEE 802.3µ 100BASE-FX/TX, IEEE802.3 10BASE-T, Standard
- Comply with IEEE 802.1Q VLAN TAG, Spanning Tree standard
- Supports 10/100M, full/half duplex auto-negotiation
- Supports auto MDI/MDIX crossover
- Supports transmission distance up to 120km
- Same card on rack mounted and desktop
- Supports over-sized packets up to 1600Bytes
- Supports hot-swappable

1.3 Technical Parameters

Mechanical Parameters	Size	21mm x 125mm x 165mm
	Package	78mm x 170mm x 226mm
	Work	-30~50℃
	Storage	-40~70℃
	Power	220V AC /110V AC
		-48V DC/+24V DC
Optical Parameters	MM 2km OR MM 5km	
	Fiber	62.5/125, 50/125,100/140μm
	Output optical power	>-15dBm
	Receiving sensitivity	<-28dB
	Distance	0~2km or 0~5km
	Connector	SC, ST, FC
	Wavelength	850nm/1300nm/1310nm
	SM	
	Fiber	9/125, 8.3/125, 8.7/125 or 10/125μm
	SM 20km	
	Distance	0~20km
	Output optical power	-15~ -8dBm
	Receiving sensitivity	< -32dB

	Connector	SC, ST, FC
	Wavelength	1310nm
	SM 25km	
	Distance	0~25km
	Output optical power	-13~ -8dBm
	Receiving sensitivity	< -34dB
	Connector	SC, ST, FC
	Wavelength	1310nm
	SM 40km	
	Distance	0~40km
	Output optical power	-11~ -6dBm
	Receiving sensitivity	< -34dB
	Connector	SC, ST, FC
	Wavelength	1310nm
	SM 60km	
	Distance	0~60km (when less than 15km, use attenuator)
	Output optical power	-5~ 0dBm

	Receiving sensitivity	< -36dB
	Connector	SC, ST, FC
	Wavelength	1310nm
	SM 80KM	
	Distance	0~80km (when less than 15km, use attenuator)
	Output optical power	-8~ -3dBm
	Receiving sensitivity	< -36dB
	Connector	SC, ST, FC
	Wavelength	1550nm
	SM 120KM	
	Distance	0~120km (when less than 15km, use attenuator)
	Output optical power	-3~ 5dBm
	Receiving sensitivity	< -39dB
	Connector	SC, ST, FC
	Wavelength	1550nm

Chapter 2 Operation

2.1 Front Panel

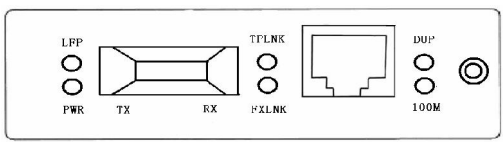

Fig 1. Front panel of dual-fiber converter

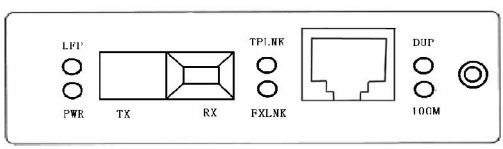

Fig 2. Front panel of single-fiber converter

2.1.1 LED indicator lamp

PWR	Green	ON: Full Duplex OFF: Half Duplex
FXLNK	Green	ON: FX Link connected Flash: FX signal transmission
TPLNK	Green	ON: TX Link connected Flash :TX signal transmission
100M	Green	ON:100M OFF:10M

DUP	Green	ON: Full Duplex OFF: Half Duplex Flash: clash when working in hall duplex
LFP	Green	ON: LFP enable OFF: LFP disable

2.1.2 Optical Port

- Ø RX: Optical signal output
- Ø TX: Optical signal input.

2.1.3 Ethernet port (NODE / HUB)

Supports auto MDI/MDIX crossover, the pin definition of RJ-45:

Pin1	TX+	Output +
Pin2	TX-	Output -
Pin3	RX+	Input +
Pin4	NC	Not connect
Pin5	NC	Not connect
Pin6	RX-	Input -
Pin7	NC	Not connect
Pin8	NC	Not connect

2.2 SW1

An 8 bits switch on Media Converter PCB signed “SW1”, settings as follows:

SW1-1	ON	RJ45 port auto negotiation closed
	OFF	RJ45 port auto negotiation enable(default)
SW1-2	ON	Half Duplex
	OFF	Full Duplex(default)
SW1-3	ON	Connect to 10M
	OFF	Connect to 100M(default)
SW1-4	ON	LFP enable
	OFF	LFP disable(default)
SW1-5	ON	Remote control closed(default)
	OFF	Remote control enable
SW1-6	ON	Cut-through

	OFF	Store-and-forward(default)
SW1-7	NULL	
SW1-8	NULL	

Chapter 3 Installation

3.1 Installation

1) After you received the devices, firstly you should check whether the packing is well, otherwise, please contact with our company or the local agent in time so as to solve the problem.
2) Turn on the power supply of the converter.
3) Connect local RX to remote TX via optical fiber, when local FPL indicator should be bright. And connect local TX to remote RX, when both local and remote FRX, FPL indicators should be bright. If they are single-fiber converters, connect the optical fiber, and it is OK.

4) Turn on the power supply of the connected Ethernet devices.
5) Installation is completed.

NOTE:

Single-fiber bi-directional Media Converter has two types:

Type A: Transmitting wavelength 1310nm, receiving wavelength 1550nm.

Type B: Transmitting wavelength 1550nm, receiving wavelength 1310nm.

Type A and Type B must be used in pair (i.e. if one end is Type A, then the other end must be Type B)